

NASA/JAXA Ground Operations Working Group TIM #10
Horizontal Dolly Operation Under JEM-EF

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1. Objective

This document presents that the horizontal dolly (GSE) operation under JEM-EF during crane operation.

2. Horizontal Dolly (GSE) Overview

- **GSE Outline**

This GSE is used for integration tasks of JEM-EF.

This GSE is the support equipment for moving JEM-EF on the ground, during assembly, dimension/alignment inspection and functional tests.

- **Overview**

Shown in Figure 1

Horizontal Dolly Operation Under JEM-EF

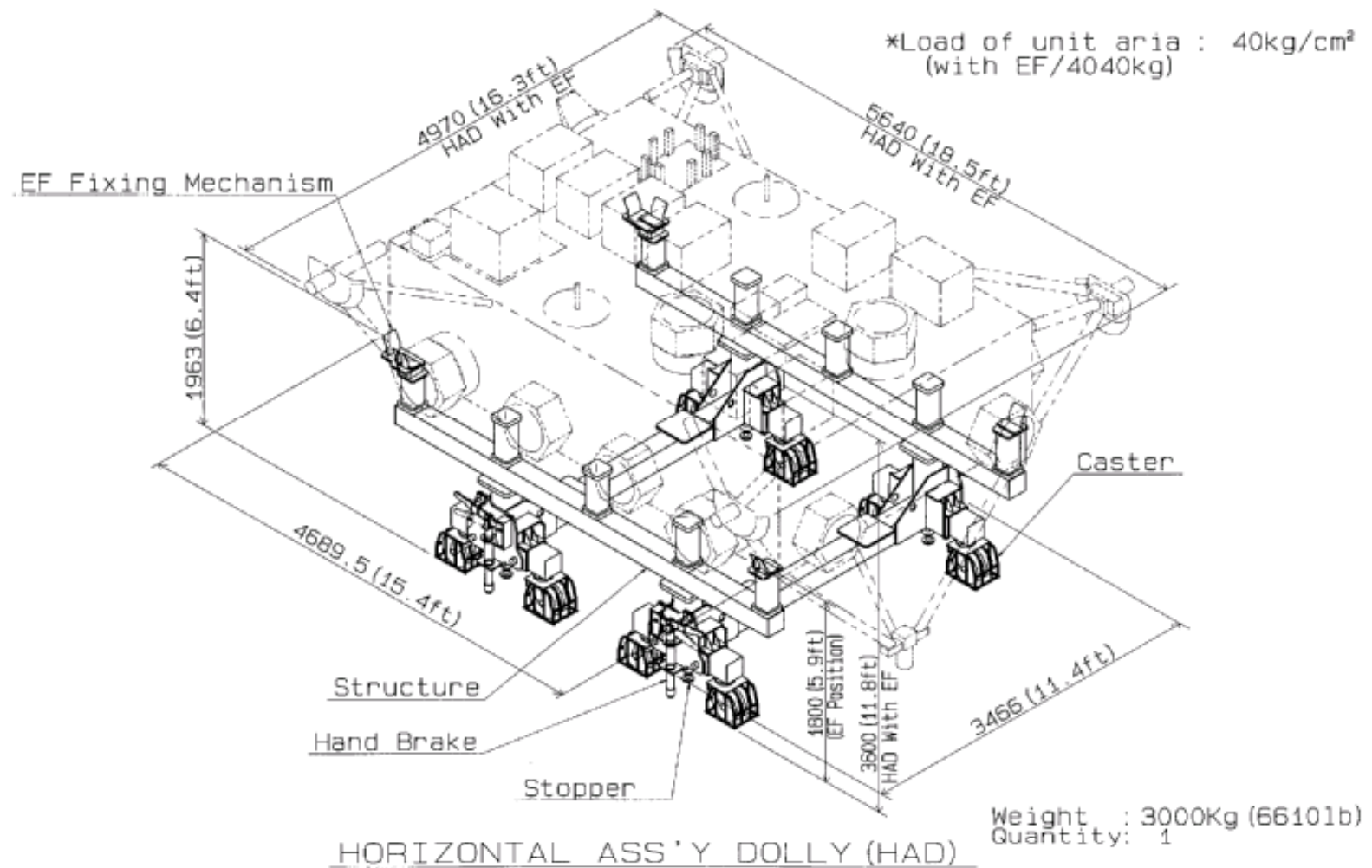


Figure 1 Horizontal Dolly Overview

2. Transportation process

Figures are showed the unpacking process image.



Fig.2 Transportation



Fig.3 Container open



Fig.4 Crane operation



Fig.5 Movement



Fig.6 Loaded on dolly



* MLI on JEM-EF removed at these photos

3. Horizontal Dolly Operation under JEM-EF

- **Purpose**

JEM-EF is handling by crane, and loaded on this GSE.

Just before mounting on the JEM-EF to the Horizontal Dolly, operator needs to confirm the interference between JEM-EF (MLI, WIF, etc.) and GSE mount. (During crane operation)

Fig.7 shows the interference parts.

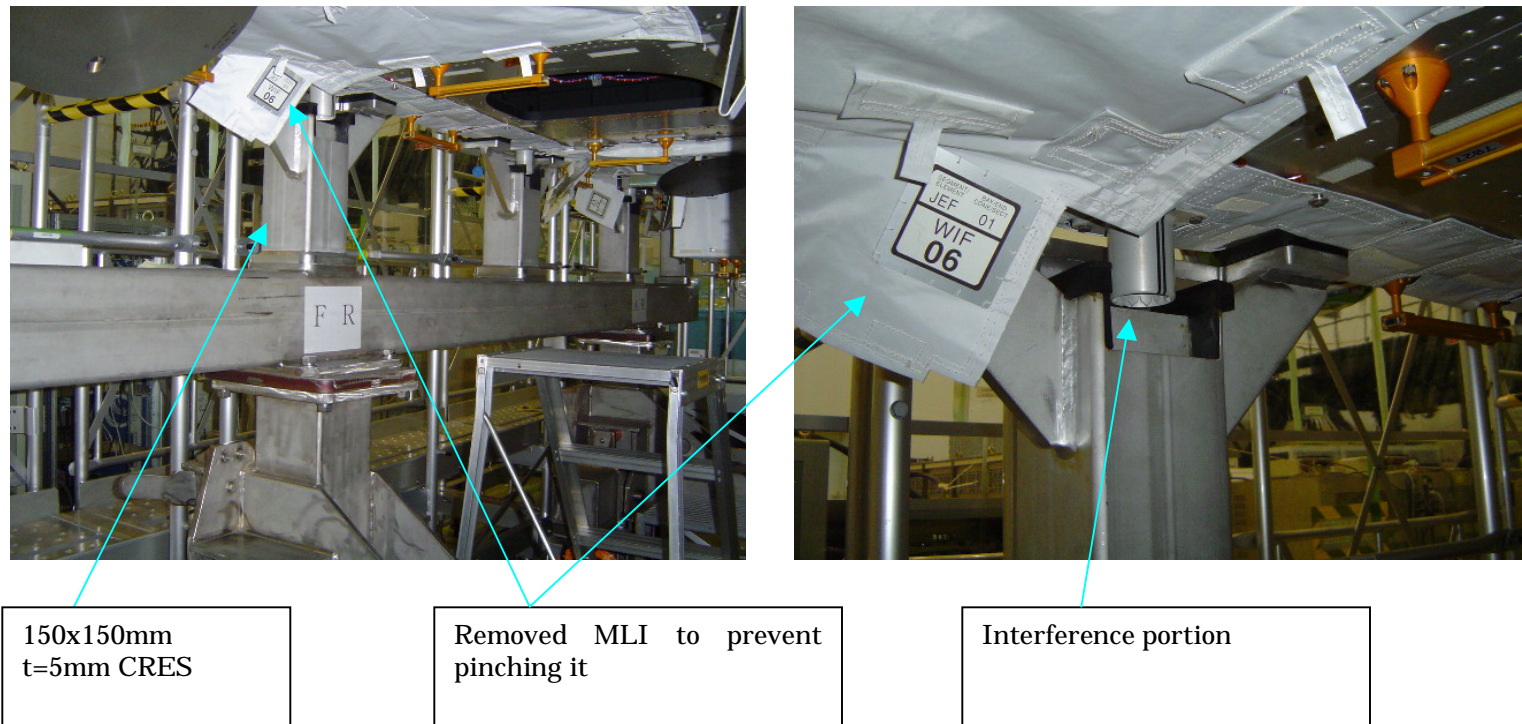
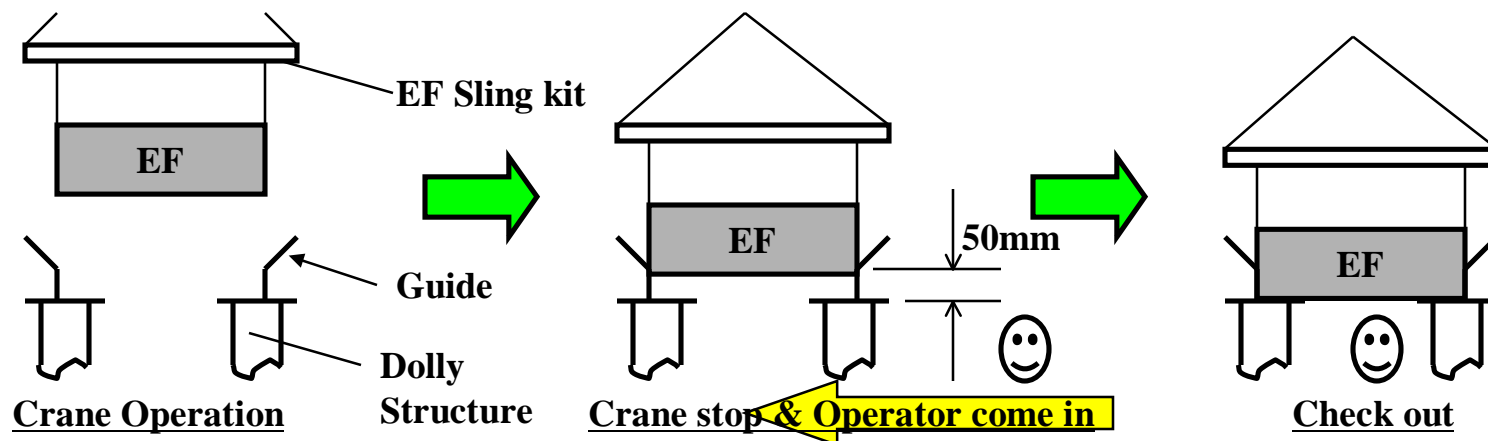


Figure 7 Bottom side of JEM-EF and dolly

3. Horizontal Dolly Operation under JEM-EF

- **Process image**

- (1) Crane operator transfer JEM-EF and stop crane before 50mm to mounting on the dolly.
- (2) The operator for check out come in under JEM-EF.
- (3) JEM-EF is mounted on the dolly.



3. Horizontal Dolly Operation under JEM-EF

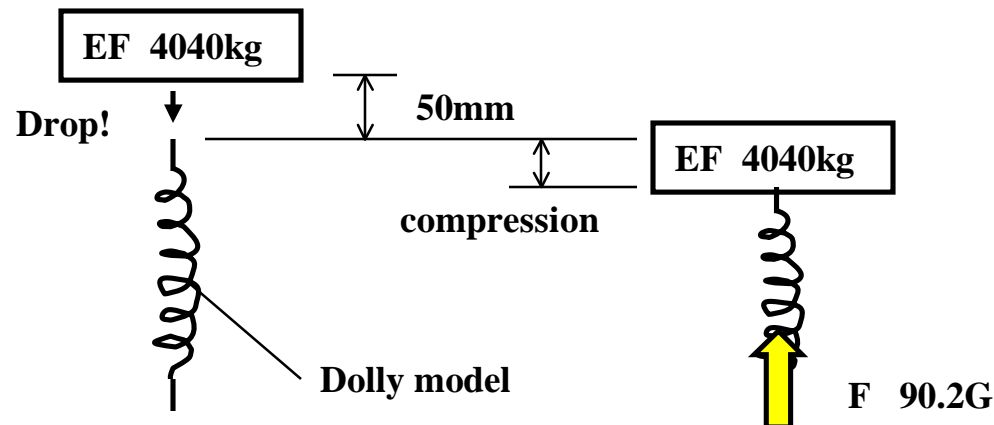
- Evaluation for Safety

JEM-EF weight: 4040kg (8907lb)

Height of JEM-EF Dropping: 50mm  90.2G

M.S. (Yield)= 0.67

This working is no problem because the dolly supports JEM-EF safely.



4. Confirmation

- NASA opinion and/or suggestion for these operations.
- What kind of the requirements need?
(ex. SLOAA (Suspended Load Operation Analysis / Approval, etc.)